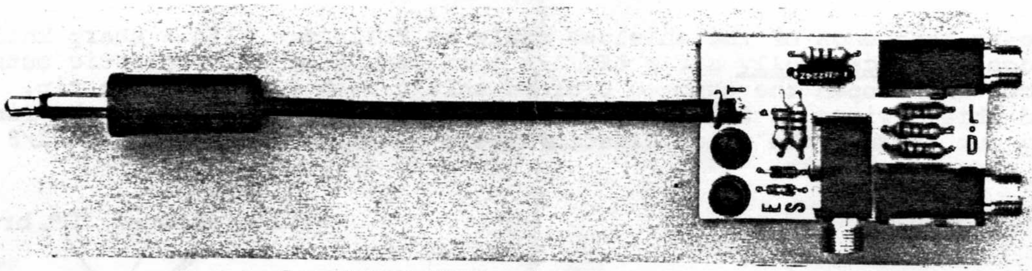
WINKY BOARD II KIT ASSEMBLY INSTRUCTIONS

Read thoroughly before beginning to avoid damage.



Completed WINKY BOARD II photo

All parts are mounted on the top (lectered) side of the board. All soldering is done on the reverse (metallic) side. While some parts are not easily damaged by limited soldering heat, some are quite heat sensitive such as LEDs, diodes, and resistors, in that order. Solder these sensitive components especially carefully and quickly. A moist flat cellulose sponge used as a work surface cools each part somewhat as it is soldered to the board. Generally, assembly proceeds from the parts situated lowest on the circuit board to the highest. Study the photo and lay-out diagram to install parts correctly the first time. Removal and resoldering invites damage.

TOOLS REQUIRED

- small (25 watt) soldering iron
- thin rosin core electronic solder
- side cutters
- sharp knife or single edge razor blade
- pliers
- magnifying glass
- cellulose sponge

KIT PARTS LIST

Resistors

			Color bands
R1	100	ohms	brown black brown (gold)
R2	100	ohms	brown black brown (gold)
R3	680	ohms	blue grey brown (gold)
R4	1000	ohms	brown black red (gold)
R5	680K	ohms	blue grey yellow (gold)
R6	220	ohms	red red brown (gold)

Capacitor - C1 - .22 mfd. (21A 2242)
3 Jacks - J1, J2, J3
3 small black plastic sleeves
Plug
Shielded cable with teflon sleeve
Small "U" cable clamp
2 LEDs (red light emitting diodes)
2 "donut" spacers

2 diodes - D1, D2
Plastic rod jack plug
Printed circuit board
Felt patch
Assembly sheet
Instruction sheet
Plastic storage box

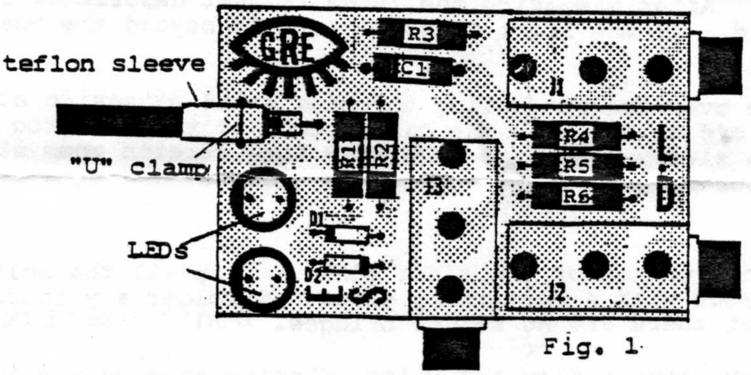


Fig. 1

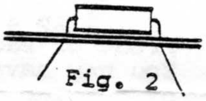


Fig. 2

The top side of the board with parts arrangement is shown in fig. 1. If the board is held up to the light and viewed from the top side, the printed circuit wiring on the reverse side will show through as the grey areas. While LEDs and diodes require specific orientation, resistors and capacitors may be installed either way around.

PROCEDURE

Bend the leads of the resistors and diodes sharply straight down and insert in the board. Bend the leads out slightly to hold parts in place as shown in fig. 2. Be sure that each diode is inserted with its black banded end oriented as shown in fig. 1. Solder and snip off excess leads.

Insert the capacitor in the board. Trim leads so that they do not bridge any separated metal areas on the board underside. Press the leads down flat and solder.

Prepare both ends of the shielded cable as follows: With a sharp knife or single edge razor carefully strip off 1/4 inch length of black plastic outside insulation. Next open the exposed braided shield with a knife blade tip. Arrange unbraided shield wires in a group and twist into a single wire with the finger tips. Carefully cut through the white plastic sleeve covering the inner wire 1/8 inch back from the ends and remove.

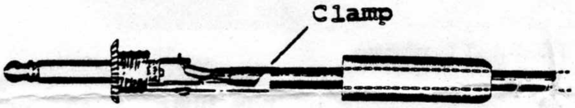


Fig. 3

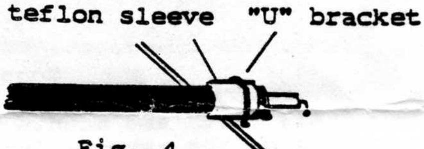


Fig. 4

Refer to fig. 3. Unscrew the plastic sleeve from the jack plug. At one end of the shielded cable, solder the inner wire to the small plug terminal and solder the shield wire through the hole in the plug clamp bracket. Using pliers, squeeze the plug clamp around the cable to hold firmly. Slip the other end of the cable through the plug sleeve and screw plug parts together.

Refer to fig. 4. At the other end of the cable, bend both the shield wire and inner wire straight down. Solder in place on the board as shown in fig. 1. (The large hole in the board receives the shield wire.) Slide the teflon sleeve as far as it will go up to the shield solder joint on the board. Place the small "U" cable clamp over the teflon sleeve and insert the "U" clamp into its holes. With pliers, grasp a projecting lead of the "U" clamp, pull firmly and bend sharply outward. Repeat for the other lead. Then solder these leads and snip. Now your cable should feel firmly clamped to the board.

The LEDs must be turned correctly before installing: be sure that the small flat area on the edge of the base is turned toward the edge of the board as shown in fig. 1. Slip the leads of each LED through a "donut" spacer and then insert in the board. These spacers elevate the LEDs slightly and help protect them from heat damage. Bend the leads out slightly to hold the LEDs in place and solder especially carefully and quickly without resting the LEDs on the sponge. CAUTION: Do not touch the LEDs until leads have cooled! Solder heat may soften the red plastic body and even slight physical movements at this time may shift the delicate innards causing damage. Snip leads.

Insert the jacks in the board. Before soldering, trim the terminals so that when they are bent forward and pressed flat to the solder areas, they do not bridge any separated metal areas. After preparing the leads as just described, solder the jack terminals to the board. If the front terminal extends beyond the board edge, trim it back.

Slip a plastic sleeve over the projecting threaded metal extension at the front of each jack. Trim off excess with the razor blade if they are too long. You may have to expand the sleeves a bit to make them fit--stretch them slightly by forcing them over a tapered round form, such as the pointed end of a pencil.

This completes the construction of the WINKY BOARD. Clip all the solder joints close to the board and inspect with a magnifying glass. Resolder any inadequate connections. Make sure that there are no solder bridges. Don't use flux remover.

Finally, peel the paper backing from the white adhesive tape on the insulating felt patch. Carefully align the patch on the back side of the board and press the sticky surface firmly in place.

Read the Instruction Sheet and your WINKY BOARD II is ready to use.

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WINKY BOARD II - Patent pending